LISTING OF THE CLAIMS

1.   (Presently Amended) A channel device comprising:

a substrate comprising a plurality of channels for electrophoretic separation; and

a plurality of deflectable cilia in fluid communication with the plurality of channels,

wherein the deflectable cilia are adapted to loading the plurality of channels from a multi-well

tray and wherein the cilia have a pitch such that adjacent cilia cannot deflect into adjacent wells

of the multi-well tray.

2.   The channel device of claim 1, wherein the deflectable cilia are adapted for

deflection by a support.

3.   The channel device of claim 1, wherein the deflectable cilia are adapted for

deflection by an active mechanism.

4.   The channel device of claim 1, wherein the substrate comprises a detection zone.

5.   (Presently Amended) A system for electrophoretic separation comprising:

a channel device comprising a substrate comprising a plurality of channels and a plurality

of deflectable cilia in fluid communication with the plurality of channels;

a multi-well tray, wherein the cilia have a pitch such that adjacent cilia cannot deflect into

adjacent wells of the multi-well tray; and

a support adapted to deflect sets of the cilia to load the channels from different rows of

wells of the multi-well tray.

6.   The system of claim 5, further comprising a controller adapted to position at least

one of the channel device, the multi-well tray, and the support.

7.   The system of claim 6, further comprising a CPU adapted to direct the controller.

8.   The system of claim 7, further comprising a detector adapted to collect

electrophoretic separation information at a detection zone on the channel device.

9.   The system of claim 8, wherein the detector is in electrical communication with

the CPU to correlate loading information from the controller and electrophoretic separation

information from the detector.

10.   The system of claim 5, further comprising a buffer tray, wherein the support is

adapted to deflect each of the cilia into the buffer tray.

11.   (Presently Amended) A loading mechanism for a channel device comprising:

a plurality of deflectable cilia adapted to fluidly communicate with a plurality of channels

in a substrate for electrophoretic separation, wherein the deflectable cilia are adapted to loading

the plurality of channels from a multi-well tray, and wherein the cilia have a pitch such that

adjacent cilia cannot deflect into adjacent wells of the multi-well tray; and

a support adapted to deflect sets of the cilia to load the channels from different rows of

wells of the multi-well tray.

12.   (Presently Amended) The loading mechanism of claim 11, wherein the support

comprises of posts to deflect individual cilia.

13.   The loading mechanism of claim 12, wherein the posts are configured such that

the support can load from a row of the multi-well tray with each deflection.

14.   The loading mechanism of claim 12, wherein the channels are configured such

that the support can load from a row of the multi-well tray with each deflection.

15.   The loading mechanism of claim 12, wherein each well in the multi-well tray

corresponds to a different channel in the channel device.

16.   (Presently Amended) The loading mechanism of claim 11, A loading mechanism

for a channel device comprising:

a plurality of deflectable cilia adapted to fluidly communicate with a plurality of channels

in a substrate for electrophoretic separation, wherein the deflectable cilia are adapted to loading

the plurality of channels from a multi-well tray; and

a support adapted to deflect the cilia to load the channels from the multi-well tray,

wherein the cilia comprise a shape-memory alloy adapted to provide resilience to return

the cilia to an initial position after the deflection.

17.   (Presently Amended) The loading mechanism of claim 11, A loading mechanism

for a channel device comprising:

a plurality of deflectable cilia adapted to fluidly communicate with a plurality of channels

in a substrate for electrophoretic separation, wherein the deflectable cilia are adapted to loading

the plurality of channels from a multi-well tray; and

a support adapted to deflect the cilia to load the channels from the multi-well tray,

wherein the cilia comprise a tendon element to control the deflection.

18.   The loading mechanism of claim 11, wherein the cilia comprise an active

mechanism to control the deflection.

19.   The loading mechanism of claim 11, wherein the cilia are deformable.

20.   (Presently Amended) A method for loading a channel device comprising:

providing a multi-well tray; and

deflecting at least one cilium a set of cilia from plurality of cilia into a row of wells of the

multi-well tray, wherein the cilia are adapted to fluidly communicate with a plurality of channels

in the channel device, and wherein the cilia have a pitch such that adjacent cilia cannot deflect

into adjacent wells of the multi-well tray.

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21. The method of claim 20, wherein deflecting comprises positioning a support to

deflect at least one cilium.

22. (Presently Amended) A method for loading a channel device comprising:

providing a multi-well tray; and

deflecting at least one cilium from plurality of cilia adapted to fluidly communicate with

a plurality of channels in the channel device, wherein deflecting comprises positioning a support

to deflect at least one cilium; andThe method of claim 21, further comprising

positioning at least one of the channel device and the multi-well tray to align the cilia to

posts connected to the support.

23. The method of claim 22, further comprising loading sample from the multi-well

tray into the channels.

24. (Presently Amended) A method for electrophoretic separation comprising:

providing a channel device comprising a substrate comprising a plurality of channels and

a plurality of deflectable cilia in fluid communication with the plurality of channels;

providing a multi-well tray, wherein the cilia have a pitch such that adjacent cilia cannot deflect into adjacent wells of the multi-well tray;

providing a loading mechanism to deflect a set of the cilia to load the channels from different rows of wells of the multi-well tray;

deflecting at least one cilium to load at least one sample from the multi-well tray;

deflecting the plurality of cilia into a buffer tray; and

providing electric current for the electrophoretic separation.

25.   The method of claim 24, further comprising loading the channel device.

26.   The method of claim 25, wherein loading comprises positioning at least one of the channel device and the multi-well plate.

27.   The method of claim 24, further comprising detecting electrophoretic separation information from a detection zone on the channel device.